

**ABSTRACT OF THE INVENTION**

The invention refers to a system, apparatus and method for carrying out a SIM-based authentication of a user accessing a WLAN, without having provided yet an IP connectivity,  
5 along with a layer-2 encryption mechanism for protecting the path between the Terminal Equipment and the Mobile network.

Therefore, the invention provides a method for establishing a PPP-tunnelling for AKA dialogues between the terminal and  
10 an Access Controller for accessing the mobile network owning the SIM.

The invention also provides an Access Controller (AC) comprising a Point-to-Point over Ethernet (PPPoE) server for tunnelling AKA dialogues from a PPP-client installed in  
15 the terminal for the same purpose, and also comprising a Traffic Router and a RADIUS-client. The AC thus including a RADIUS-client is interposed between a RADIUS-proxy accessed from the access points (AP) in the WLAN and the mobile network where SIM-based authentication is carried out.

20